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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
| 08/478,114 | 06/07/95 | POENISCH | P 6605-9 |

D1M1/0324

EXAMINER
GRAYBILL, DART UNIT
1107 PAPER NUMBER03/24/97
DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

| | |
|-------------------------------|---------------------------------|
| Application No. 08/478,114 | Applicant(s) Poenisch et al. |
| Examiner David E. Graybill | Group Art Unit 1107 |



Responsive to communication(s) filed on 11 Dec 1996

This action is FINAL.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

Claim(s) 1-31 and 49-54 is/are pending in the application.

Of the above, claim(s) 49-54 is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

Claim(s) 1-31 is/are rejected.

Claim(s) _____ is/are objected to.

Claims _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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Applicant's election of species I, claims 1-31 in Paper No. 9 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 49-54 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b) as being drawn to a non-elected invention. Election was made **without** traverse in Paper No. 9.

Claim 27 is objected to because the term "AUPb2" appears to be grammatically incorrect.

Claims 1-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1-10, 13, 14, 16-26, 29 and 30 the scope of the phrase "bronzing agent" is unclear.

In claims 3 and 18 the phrase "said bronzing agent comprises about 100 weight % Pb" appears to be incorrect because the transitional term "comprises" is inclusive of additional materials, yet, the phrase "100 weight %" is exclusive of additional materials.

In claims 5 and 20 the phrase "comprises pure indium" appears to be incorrect because the transitional term "comprises" is inclusive of additional materials, yet, the term pure is exclusive of additional materials.

In claim 9, line 9, and claim 30, the phrase "the distance" has insufficient literal antecedent basis.

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In claim 12 the scope of the phrase "hermetic bond" is unclear.

Claims 1 and 16 appear to be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112 set forth in this Office action.

Claims 2-15 and 17-31 appear to be allowable if rewritten to overcome the rejection under 35 U.S.C. 112 set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of apparently allowable subject matter: The prior art appears to not teach a process comprising the steps of providing an integrated circuit die with a gold bump; forming a barrier layer on the gold bump; forming a bronzing agent on the barrier layer; and providing the substrate with a conductive bonding area covered with gold.

The prior art made of record and not applied to the rejection is considered pertinent to applicant's disclosure. It is cited primarily to show processes of manufacturing a semiconductor package similar to the process of the instant claimed invention.

Any telephone inquiry of a general nature or relating to the status (MPEP 203.08) of this application or proceeding should be directed to the group receptionist at (703) 308-0661.

Any telephone inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Graybill at (703) 308-2947. Regular office hours: Monday through Friday; 8:30 a.m. to 6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, supervisory primary examiner, John Niebling, can be reached at (703) 308-3325.

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The fax phone number for group 1100 is (703) 305-3599.

David E. Graybill
David E. Graybill
Patent Examiner
Art Unit 1107

D.G.
17 March 1997